

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-11 (canceled).

12. (new) A pressure electrolyser, comprising: a pressure reservoir; an electrolytic cell block containing a number of electrolytic cells and positioned in the pressure reservoir, the electrolytic cells each containing anodes and cathodes; and an electrolyte circulatory system for supplying electrolyte to the anodes and cathodes, the circulatory system including an oxygen separator operative to separate gaseous oxygen formed during operation of the pressure electrolyser and a hydrogen separator operative to separate gaseous hydrogen formed during operation of the pressure electrolyser, and a store of an inert gas to inert the pressure electrolyser when it is switched off, the store of inert gas being supplyable to the oxygen separator, the electrolyte circulatory system further including a connecting line arranged so that a part of the electrolyte can be pushed out of the hydrogen separator when the inert gas is applied to the oxygen separator so as to displace the gaseous hydrogen.

13. (new) A pressure electrolyser in accordance with claim 12, wherein the oxygen separator and/or the hydrogen separator is arranged outside the pressure reservoir so that when the inert gas is applied to the oxygen separator a part of the electrolyte is pushed by the pressure reservoir and/or by the oxygen separator into the hydrogen separator in order to displace the hydrogen in the hydrogen separator.

14. (new) A pressure electrolyser in accordance with claim 12, wherein the oxygen separator and/or the hydrogen separator is formed by a part of the volume inside the pressure reservoir so that when the inert gas is applied to the oxygen separator, a part of the electrolyte is pushed into the part of the pressure reservoir volume forming the hydrogen separator in order to displace the hydrogen.

15. (new) A pressure electrolyser in accordance with claim 12, wherein the connecting line is arranged outside the pressure reservoir.

16. (new) A pressure electrolyser in accordance with claim 13, wherein the connecting line is arranged outside the pressure reservoir, the connecting line being formed by a shuttle line that runs beneath the liquid level of the electrolyte and connects the oxygen separator to the hydrogen separator.

17. (new) A pressure electrolyser in accordance with claim 12, wherein the connecting line is provided inside the pressure reservoir.

18. (new) A pressure electrolyser in accordance with claim 12, wherein the electrolytic cell block has a housing that together with the pressure reservoir forms at least two separate chambers which are part of the electrolyte circulatory system and which are delimited from the electrolytic cells by the housing and from the environment by the pressure reservoir, one of the separate chambers being part of an anolyte circuit and connected to the oxygen separator and another of the separate chambers being part of a catholyte circuit and connected to the hydrogen separator.

19. (new) A pressure electrolyser in accordance with claim 18, wherein the separate chambers are separated from one another by dividing walls which extend between the housing of the electrolytic cell block and the pressure reservoir, the connecting line being formed by a passage in an area of the dividing walls beneath the liquid level of the electrolyte.

20. (new) A process for switching off a pressure electrolyser which comprises a pressure reservoir and an electrolytic cell block containing a number of electrolytic cells and positioned in the pressure reservoir, the electrolytic cells each containing anodes and cathodes and an electrolyte circulatory system for supplying electrolyte to the anodes and cathodes, an oxygen separator to separate gaseous oxygen formed during operation of the pressure electrolyser and a hydrogen separator to separate gaseous hydrogen formed during operation of the pressure

electrolyser being provided, an inert gas, the process comprising the steps of: switching off the pressure electrolyser; and feeding inert gas to the oxygen separator so that a part of the electrolyte is pushed out of the hydrogen separator via a connecting line contained in the electrolyte circulatory system, thereby displacing the gaseous hydrogen.

21. (new) . A process in accordance with claim 20, wherein the oxygen separator and/or the hydrogen separator is provided outside the pressure reservoir, and when the inert gas is applied to the oxygen separator, pushing a part of the electrolyte is pushed by the pressure reservoir and/or the oxygen separator into the hydrogen separator in order to displace the hydrogen in the hydrogen separator.

22. (new) A process in accordance with claim 20, wherein the oxygen separator and/or the hydrogen separator is formed by a part of the volume inside the pressure reservoir, and when the inert gas is applied to the oxygen separator, pushing a part of the electrolyte is pushed into the pressure reservoir volume forming the hydrogen separator in order to displace the hydrogen.

23. (new) A process in accordance with claim 20, wherein the inert gas is nitrogen.